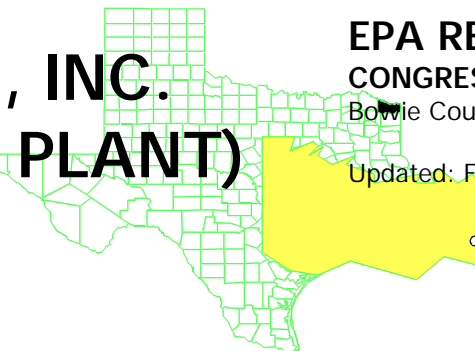


KOPPERS CO., INC. (TEXARKANA PLANT) TEXAS

EPA ID# TXD980623904

EPA REGION 6
CONGRESSIONAL DISTRICT 01
Bowie County

Updated: February 18, 2000



Site Description

- Location:** ! West 3rd Street, one mile west of downtown, Texarkana, TX.
- Population:** ! This site is located in an area characterized by an 85% minority population (1990 Census data).
! Approximately 25,000 people live within 4 miles of the site.
- Setting:** ! 62-acre wood treatment facility operated by a succession of owners between 1903 and 1961, closed and sold in 1961, facilities demolished in 1962.
! The Carver Terrace residential subdivision built in 1964, comprising 79 homes on the north 34 acres of the site.
! Remaining south 28 acres, purchased by Bruce Kennedy, became a sand/gravel mining operation between the late 1970s and 1984.
- Hydrology:** ! Wagner Creek flows along southwest edge of site.
! A shallow water table (that is not a drinking water source) is located 3 to 5 feet below surface and seeps into the sand and gravel pits located on the southern portion of the site.
! Entire site is within the 100-year flood plain.

Wastes and Volumes

- ! An estimated 45 million gallons of shallow groundwater are contaminated, and approximately 2,150 cubic yards of soil are contaminated to a depth of one foot, creating a potential health risk.
- ! 160 cubic yards of contaminated soil generated during the Remedial Investigation is housed in 3 metal containers on the southern portion of the site.
- ! The primary contaminants of concern are polynuclear aromatic hydrocarbons (PAHs), which are known carcinogens.

Site Assessment and Ranking

NPL LISTING HISTORY

Site HRS Score: 31.31
Proposed Date: 10/15/84
Final Date: 6/10/86
NPL Update: No. 2

! The Texas Department of Water Resources (TDWR), now the Texas Natural Resource Conservation Commission (TNRCC) became aware of this site through the Eckhardt Survey in 1979.

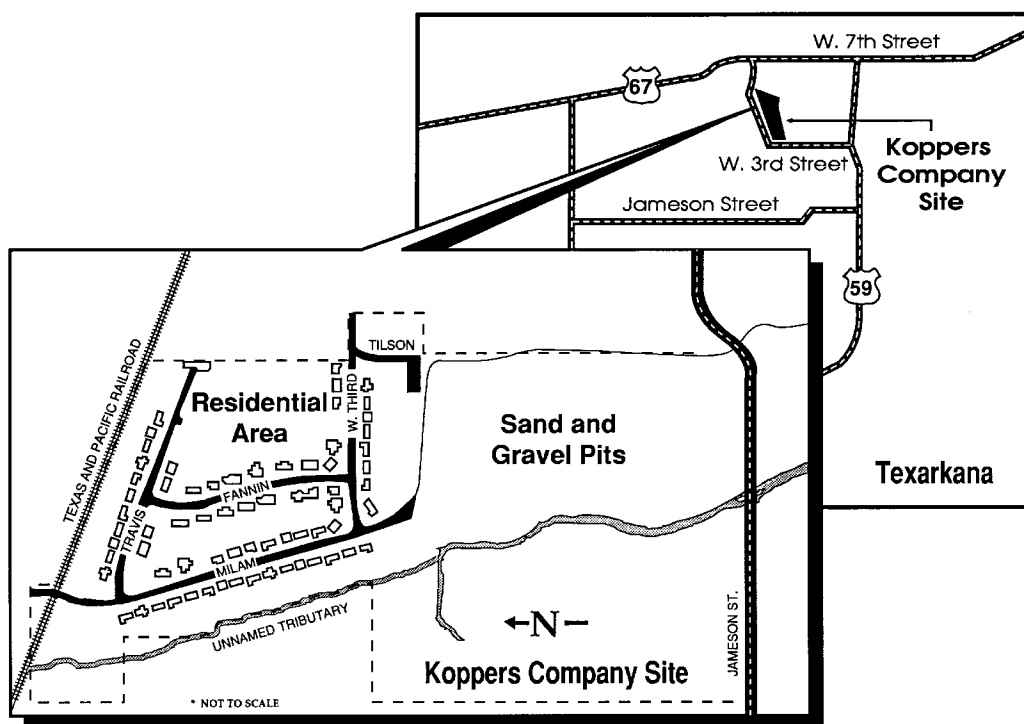
! TDWR and EPA collected samples at the site in 1980-1981, and from these, TDWR referred the site to EPA for proposal to the National Priorities List (NPL).

! TDWR ordered Bruce Kennedy to cease mining operations in Fall 1984.

! Local residents expressed concern about health risk from site.

! Administrative Order issued 12/84 for posting of warning signs and fencing the gravel pit area, and in 5/85 to Koppers Co. for placement of clean dirt and sod in the yards of 24 residences.

Site Map and Diagram



The Remediation Process

Site History:

- ! Wood treatment facility began in 1903; purchased by Koppers Co., Inc. in 1933 and operated it until 1961, when the plant was removed and the land sold.
- ! Carver Terrace, Inc. eventually acquired the north half and built a subdivision; the southern half was acquired by Bruce Kennedy who mined it for sand and gravel until the Texas Department of Water Resources (TDWR) ordered the company in Fall 1984 to cease operation.
- ! December 1984 - January 1985, EPA constructed a fence.
- ! July 1985 - March 86, the Potentially Responsible Party (PRP) placed clean dirt and sod in the yards of some residences to prevent exposure to the contaminated soils while the site was being studied. Approximately 24 homes were treated this way.
- ! Remedial Investigation/Feasibility Study completed April 1988.
- ! Feasibility Study completed June 1988.
- ! Remedial Design/Remedial Action negotiations with Koppers suspended in January 24, 1990 due to the need to revise the risk assessment and action levels to be reflective of continuous residential use - completed and discussed with the community in April 1990.
- ! Congressman Chapman attached an amendment to EPA's Budget Bill allocating \$5M to buy out the Carver Terrace community in May 1990 - Approved by Congress on November 5, 1990, signed by the President on October 6, 1991.
- ! An Interagency Agreement was signed with the U.S. Army Corps of Engineers (USACE) on May 21, 1991, to implement the Congressional mandated buyout.
- ! The Texas Department of Health conducted a Health Surveillance Survey in the community March 11-16, 1991. A follow-up health survey at the Koppers site was performed March 30 - April 4, 1992.
- ! The Amended Proposed Plan which outlined the 2 changes that would be included in the existing 1988 ROD was sent to the public for public comment. The changes were: 1) the purchase of the homes in Carver Terrace and provide relocation assistance, and 2) reclassifying the future use of the property from residential to commercial.
- ! The public comment period for the Amended Proposed Plan started January 15, 1991, and was extended until April 1, 1991.
- ! A public meeting on the Amended Proposed Plan was conducted on January 22, 1991.
- ! TWC (now Texas Natural Resource Conservation Commission (TNRCC)) signs the State Superfund Contract on March 2, 1992, enabling EPA to initiate the buyout once the Amended ROD is signed.
- ! The Amended ROD is signed March 4, 1992. Relocation efforts commenced.
- ! The Texas Department of Health conducted a follow-up survey on the community from March 29 through April 4, 1992.
- ! May 1992, ATSDR in conjunction with the Texas Department of Health released their initial findings from the investigation conducted in 1991 in the "Health Surveillance Survey Report".
- ! FY93 Appropriations Bill which allocated an additional \$612K for the COE to complete the buyout was approved and funded in November 1992.
- ! EPA issued a UAO to PRP 3/2/93, to conduct the RD/RA and demolition activities. The PRP complied 3/31/93.
- ! Relocation of the residents is completed July 30, 1993.
- ! RD/RA activities commenced 3/31/93.
- ! Demolition plans approved and demolition was completed 1/27/94.
- ! Close-out Demolition Report approved 5/94.
- ! Former residents filed a Class Action Suit against EPA and the COE in May 1994, involving the execution of the buyout and relocation efforts.
- ! The Class Action Suit filed by the residents was dismissed August 1995, by the U.S. District Judge

for the District of Columbia. An appeal was made and was denied.

! Conditional Approval given on the revised Pre-Design Groundwater & Soil Reports.

! Approval was provided on the Surface Soil Remedial Action Work Plan.

! Soil removal/replacement activities commenced 5/13/96 and were completed in July, 1996.

! The DNAPL/Groundwater Pilot Study Work Plan was modified 7/12/96 since the City of Texarkana's Public Work Department did not provide clearance to discharge treated water to its POTW. Comments on this plan were provided to Beazer 12/96.

! Soil Remedial Action Report was submitted November 23, 1996.

! DNAPL and porous media characterization testing was completed by Queens' University in Kinston, Ontario Canada. Results were submitted to EPA 2/98.

Health Considerations:

! Potential human exposure risks include direct contact with, and accidental ingestion of, contaminated soils and inhalation of contaminated dust.

! Contamination has been found in the shallow water table, and extensively in surface soils to a depth of one foot

! The nearest drinking water well is located 3 blocks from the site, but is not presently at risk.

Other Environmental Risks:

! Creosote seeps and discharges to Wagner Creek have been documented.

Record of Decision

Signed: September 23, 1988
Amended: March 4, 1992

! Soil washing of contaminated soils and oil water separation and either carbon adsorption or fluidized carbon bed treatment of ground water. Soils will be disposed of at an off-site hazardous waste facility if the soils do not meet the remedial goal or shows leaching using the EPA Toxicity Characteristic Leaching Procedure test.

! The 1988 selected remedy was amended to include 1) the buyout of the Carver Terrace subdivision, 2) the demolition, removal and disposal of debris to an appropriate facility, and 3) the reclassification of the property to "non-residential use."

Ground Water:

! Separation of oily phase from ground water extracted through on-site wells.

! Removal of organic contaminants by either carbon adsorption or fluidized carbon bed treatment, then return clean, treated water back to the aquifer.

Soil Treatment:

! As a result of the Surface Soil Predesign Investigation performed at the site during the summer and fall of 1994, soil washing will not be utilized due to the limited volume of soil requiring treatment. Implementation of the soil washing alternative is not a cost-effective remedial option for surface soils due to volume and its ineffectiveness is handling soil which contains high percentages of fines, debris, and tar-like consistency. Thus, excavated soils were disposed off-site at an appropriate facility, as provided for in the ROD.

Buyout and Relocation:

- ! The amended remedy included provisions for buyout and relocation of the Carver Terrace subdivision residents and a church.
- ! The USACE executed the buyout and relocation effort on behalf of EPA and completed these activities 7/93.
- ! Structures in the Carver Terrace Subdivision were demolished and the debris was taken to an appropriate facility.

<u>Other Remedies Considered</u>	<u>Reason Not Chosen</u>
1. "No Action"	Did not meet remedial objectives
2. Capping	Not as effective as selected remedy
3. In Situ Biological Treatment	Difficult to implement effectively
4. On-site Incineration	Difficult to implement effectively
5. Off-site Incineration	Poor cost-effectiveness
6. Off-site Landfill disposal	Not as cost-effective as selected remedy

- ! This site is being addressed through Federal and potentially responsible parties' actions.

Community Involvement

- ! Community Involvement Plan: Developed 10/84, revised 6/88 and again 6/92.
- ! Open houses and workshops: 1/85, 5/85, 4/90, 7/91, 4/92, and 1/93
- ! Original Proposed Plan Fact Sheet and Public Meeting: 6/88.
- ! Original ROD Fact Sheet: 10/88
- ! Milestone Fact Sheets/Public Notices: 2/85, 6/88, 10/88, 1/89, 1, 3, & 8/91, 1, 3, & 4/92, 4/96.
- ! EPA Amended Proposed Plan and Public Meeting: 1/92
 - Addressed the basis for the buyout and reclassification of the residential property
 - Discussed how the revised action level would have impacted the original projections on volume, time, and cost for excavating and treating the contaminated soil if a buyout did not occur.
- ! Citizens on site mailing list: 160
- ! Constituency Interest:
 - Health Study conducted by the Texas State Department of Health.
 - Relocation effort completed 7/93.

- ! Site Repository: Texarkana City Hall, 320 Texas Blvd., Texarkana, TX 75501

Technical Assistance Grant

- ! Availability Notice: 12/21/88; Re-advertised 8/17 & 31/90
- ! Letters of Intent Received:
 - 1) Coalition for a Clean Carver Terrace - Terminated for non-response.
 - 2) Texarkana Black Chamber of Commerce (TBCC) - Public Notice acknowledging receipt run 9/14/90.
- ! Final Application Received: TBCC submitted final application for TAG 1/91.
- ! Grant Award: 3/08/91

! Current Status: Grant funds expended, TAG closed.

Contacts

! Remedial Project Manager (EPA): Ursula R. Lennox, 214-665-6743, Mail Code: 6SF-LP
! State Contact: (TNRCC) Fay Duke, 512-239-2443, Mail Code 144
! Community Involvement Coordinator (EPA): Donn Walters, 214-665-6483, Mail Code: 6SF-P
! Attorney (EPA): Paul Wendel, 214-665-2136, Mail Code: 6SF-DL
! State Coordinator (EPA): Karen Bond, 214-665-8522, Mail Code: 6SF-AT
! Prime Contractor: KEY Environmental, Inc. (by PRPs)

Present Status and Issues

! EPA approved the workplan for the ground water pilot study in May and the PRP mobilized on-site June 29, 1997. To obtain a comprehensive Remedial Action Report for the soil, the PRP conducted a geophysical investigation on property flanked between West 3rd Street and the drainage ditch to ensure that underground storage tanks (UST) do not exist on-site. Historical records do not indicate UST, nonetheless, heavy staining remained in the area after performing the 1 foot soil removal action. This effort will resolve the concern brought out by workers of the former plant, and provide closure on this issue.

! Report on Geophysical Survey was submitted on 9/8/97, with recommendations.

! Containment wall was installed between the gravel pits and Wagner Creek in the Spring of 1998. This will contain the seeps that have occurred over the years.

! DNAPL recovery testing under passive conditions (i.e., without groundwater pumping), is on-going.

! DNAPL recovery testing of Sump CS-01 in the passive mode with the HDPE barrier wall installed was completed. DNAPL recovery testing using Sump CS-02 operating in a groundwater recirculation mode was also completed.

! DNAPL/Groundwater Pilot Study Report and 95% Remedial Design submitted 11/13/98.

! EPA and TNRCC met with Beazer East, Inc. and its contractor on 3/2/99 to discuss the DNAPL/Groundwater Pilot Study Report and 95% Remedial Design. A follow-up meeting on these reports was conducted in 11/99.

! Beazer plans to move forward towards implementing recommendations for further evaluation of magnetic anomalies identified by the geophysical investigation in the former process and lagoon areas.

Benefits

! Soil in areas identified in the Remedial Investigation where the sum of the carcinogenic Polynuclear Aromatic Hydrocarbons exceeded 100 ppm were excavated to one foot. Excavated areas were replaced with clean soil purchased from outside of the site. Performing this activity significantly reduced environmental risks associated with the site. A total of 2,113.57 cubic yard of material were generated from the excavation and container removal activities at the site.

! Non-aqueous phase liquids in the upper aquifer will be collected and treated to the maximum extent possible. Though this aquifer is not a drinking water source, treatment is necessary in order to avoid the potential of contaminating a lower aquifer. The Confined Zone which exists between the two aquifers will be allowed to naturally attenuate following remediation and will be monitored to ensure that it is being naturally cleansed.